



LONG LINK CHAINS





With 60 years of experience, I'ANCO manufactures quality, cost-effective products. Our extensive selection of job-specific products are in stock for you.

I'ANCO CAST SQUARE PROFILE CHAIN



I'ANCO Products pioneered the square profile cross section for our line of long link chain. I'ANCO cast square profile long link chain and flights are manufactured to provide long life and low maintenance. Manufactured in Austenitic Manganese or Alloy Steel, these rugged castings are ideal for bark, chips and refuse conveying.

Austenitic Manganese steel is the most common material supplied due to its ability to endure severe impact, combined with its ability to generate a work-hardened surface in the range of 500-600 BHN. This combination of properties makes Manganese an excellent choice for most long link applications.

I'ANCO's Cast Alloy 2A Steel in the quenched and tempered condition offers higher ultimate strength and more abrasion resistance than manganese steel. If the application is abrasive or gritty with little or no impact, an alloy chain should be considered for its durability and resistance to wear.



MANUFACTURING PROCESS



I'ANCO square profile long link chains are manufactured using cast Austenitic Manganese and Alloy Grade 2A Steels. With both of these materials the chemistry and heat treatment are critical. All castings used by I'ANCO are checked for chemical composition before the metal is poured. This ensures that the exact physical properties required can be achieved during heat treatment.

The castings are then inspected for any defects prior to assembly. After the chain has been assembled, a Manganese chain would be rumbled to start the initial impact of the work hardening process. The Alloy Steel chain would be heat treated through quench and tempering to provide a through-hardened product.

The final quality test performed on the chain is a proof-load; all chains are pulled to twice their designed working loads.

I'ANCO square link chain has been designed to provide maximum bearing area between the links. The inner surface of a link is in complete contact with the entire inner surface of the next link as compared with round link chain, which has a very small contact area.

ROUND VS SQUARE LINK



I'ANCO square link chain provides a greater cross section than round link chain. The sectional increase is between 18% - 20%, giving greater strength to the chain. The square design of the chain also gives a greater surface area on the wearing surfaces.



Competitive products,
for convenience.

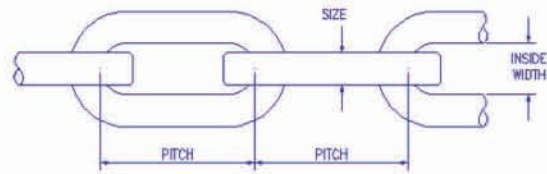
I'ANCO LONG LINK CHAIN



I'ANCO Products can help keep you competitive in a demanding marketplace. As the pioneer of the squared profile for long link chain, I'ANCO recommends this style of chain for your log haul and waste conveyor requirements.

Available in both Austenitic Manganese and Alloy 2A (a controlled balanced selection of strength enhancing elements), I'ANCO can provide a solution to your conveying needs.

CHAIN SIZE	EST. WT. (lbs)	MANGANESE MAX WORKING LOAD	ALLOY 2A MAX WORKING LOAD	ULTIMATE STRENGTH
1 x 1-3/4 x 6	9	20,000	24,000	100,000
1-1/8 x 2 x 6	13	25,000	30,000	125,000
1-1/4 x 2 x 6	16	30,000	36,000	150,000
1-1/2 x 2-1/4 x 8	21	43,000	51,000	215,000
1-3/4 x 2-1/2 x 8	30	58,000	69,000	285,000



CONNECTING LINKS



I'ANCO Products offers two styles of connecting links for your cast square long link. Depending on the material of your original chain, I'ANCO can provide a #4 Alloy Weld In Style link or a #5 Manganese Lap Style link.

CHAIN SIZE	EST. WT. (lbs)
1 x 1-3/4 x 6	4.5
1-1/8 x 2 x 6	6
1-1/4 x 2 x 6	7
1-1/2 x 2-1/4 x 8	15
1-3/4 x 2-1/2 x 8	21.5

#4 Alloy Weld In Style



#5 Manganese Lap Style





With 60 years of experience, I'ANCO manufactures quality, cost-effective products. Our extensive selection of job-specific products are in stock for you.

I'ANCO SERIES 300 INTEGRAL FIXED LOOP FLIGHT



When reliability counts, I'ANCO Series 300 integral flights are the number one choice for pulpwood applications. The rugged box design include one pitch of our square profile chain with the flight and is joined with #5 lap links at the factory and #4 weld-in style for field repairs.

I'ANCO Products builds our cast chains with integral flights to suit your specific requirements. The flights are spaced accordingly to minimize wear and maximize throughput. The symmetrical design of the heavy-duty flights allows for the chain to drag material on either the carry or return runs, or to be flipped extending the life of the chain. The box design with the internal gussets provides the best combination of lightweight and high strength. I'ANCO builds in thicker wear surfaces so the components last longer.

I'ANCO Series 300 flights are offered in either cast manganese or Alloy 2A steel depending on your conveyor's specific requirements. The manganese flights work hardens in the correct applications and develops a tough hardened surface that will resist wear. In dry, gritty applications with negligible impact, I'ANCO recommends our cast Alloy 2A. The Alloy 2A flights are heat-treated providing a through-hardened product to ensure long life without compromise.



SERIES 300 INTEGRAL FIXED LOOP FLIGHT

I'ANCO cast Series 300 flights are available from 4" to 6" high depending on the size of the chain and up to width of 48".

CHAIN SIZE	HEIGHT	WIDTH
1 x 1-3/4 x 6	4"	18" up to 30"
1-1/8 x 2 x 6	4-1/2 and 5"	12" up to 36"
1-1/4 x 2 x 6	4-1/2 and 5"	12" up to 36"
1-1/2 x 2-1/4 x 8	5 and 6"	26" up to 48"
1-3/4 x 2-1/2 x 8	5 and 6"	26" up to 48"



I'ANCO SERIES 400 ALLOY DUAL TANG FLIGHT



I'ANCO's cast alloy Series 400 dual tang flights are manufactured from a carefully selected combination of alloys which, in the heat treated condition has proven itself as a tough, long wearing product that can be easily welded. The superior grade of steel is selected because of its added strength and durability, enabling movement of a higher volume of product for longer periods of time.

INSTALLATION

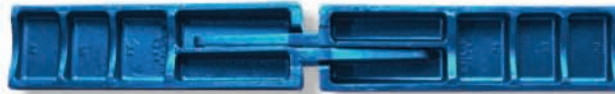
I'ANCO's Series 400 flights are supplied as two identical pieces per flight. To assemble, use a vertical link with the vertical face of the flight facing the running direction of the chain. Slide the two tangs together until the body rests against the link on both sides. Clamp in position and tack each end, both sides; also tack the tangs to the ribs on the outer edge. When tacking is completed, finish with two passes on the chain and one pass on the tang.



SERIES 400 ALLOY DUAL TANG FLIGHT

With widths ranging from 12" to 48" and heights from 4" to 6", I'ANCO cast Series 400 flights offers flexibility to suit your needs. The abrasion resistant dual tang flights provides the best economical solution without compromising integrity and reliability.

CHAIN SIZE	HEIGHT	WIDTH
1 x 1-3/4 x 6	4"	12" up to 30"
1-1/8 x 2 x 6	4-1/2 and 5"	12" up to 40"
1-1/4 x 2 x 6	4-1/2 and 5"	12" up to 40"
1-1/2 x 2-1/4 x 8	6"	26" up to 48"
1-3/4 x 2-1/2 x 8	6"	26" up to 48"





With 60 years of experience, I'ANCO manufactures quality, cost-effective products. Our extensive selection of job-specific products are in stock for you.

CAST LONG LINK CHAIN SPROCKETS



REPLACEABLE CAST ALLOY LOOSE TOOTH

I'ANCO Products is presenting our line of economically priced cast alloy flanged loose tooth sprockets for long link chain. The cast flanges assist the tracking and alignment of the long link chain as it engages the tooth.



I'ANCO's cast alloy teeth are designed to operate in areas subject to severe abrasive media such as ash handling systems and waste conveyors with high amounts of sand and grit. Available in a 7-tooth sprocket arrangement for various chain sizes, these sprocket teeth are cast and heat-treated under stringent guidelines to a typical 380 BHN for long life wearability.

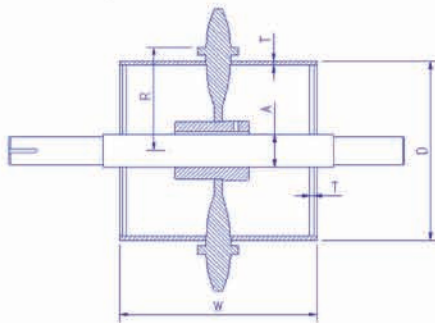
I'ANCO recommends alloy steel for these very abrasive applications and are confident that our line of loose tooth sprockets will meet and exceed your expectations.

CAST SOLID MANGANESE

I'ANCO Products Ltd is a pioneer of cast manganese long link chain sprockets for log haul, chip and hog fuel conveyor applications. The work-hardening characteristics of austenitic manganese significantly extend sprocket life in these applications. With over 60 years of experience, I'ANCO employs our expertise in metallurgical knowledge to provide a sturdy and durable sprocket. The carrying face of each tooth will work harden to over 500 BHN, preventing premature tooth wear.



I'ANCO cast sprockets are designed and manufactured in a modular system allowing for customization while maintaining the shortest possible lead times. I'ANCO sprockets are cast with a double taper tooth allowing the tooth to catch the chain as it comes around every time. The tooth location and pitch diameter are fixed in the pattern ensuring a perfectly running sprocket.



CHAIN SIZE	DRUM		RADIUS	BORE SIZES	
	D	W	T	A	
5 Tooth					
1 & 1-1/8 x 1-3/4 x 6	14	As Required	1/2	8-7/8	2-7/16 – 3-15/16
1-1/8 & 1-1/4 x 2 x 6	14	As Required	1/2	8-1/8	2-7/16 – 3-15/16
7 Tooth					
1 & 1-1/8 x 1-3/4 x 6	20	As Required	1/2	12-1/4	2-15/16 – 5-7/16
1-1/8 & 1-1/4 x 2 x 6	20	As Required	1/2	12-3/16	2-15/16 - 7

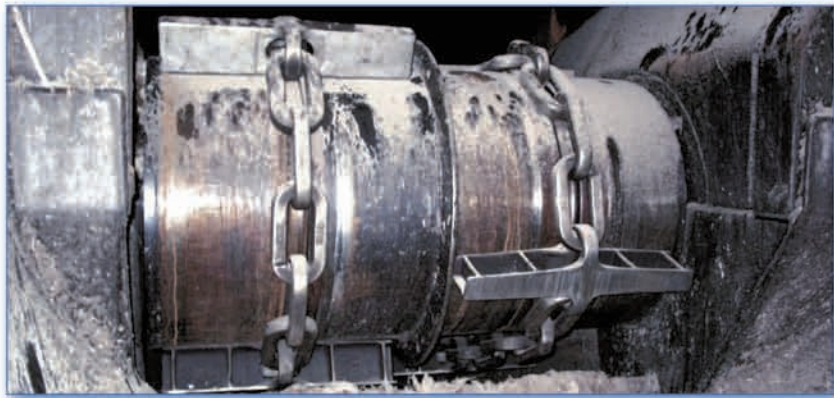


CAST ALLOY SINGLE GROOVE DRUMS

I'ANCO Alloy 2A heavy-duty single groove drums are lighter and stronger than an all steel fabricated construction. I'ANCO Alloy 2A is a carefully selected balance of alloys to provide maximum resistance to abrasion and impact.

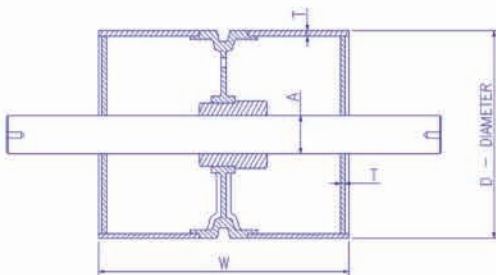
The center of an I'ANCO cast drum features extra wear material around the chain groove for a longer lasting drum with greater strength and durability. Options for welded-on manganese wear strips are available upon request.

The groove depth is a critical area of the drum and I'ANCO's cast drums are designed to suit the specific chain size. The groove does more than guide the chain in the conveyor system; it also assists in reducing wear associated with the articulation of the chain. The weldability of I'ANCO Alloy 2A allows for the measurement of the groove depth and build up of the groove as required.



It is critical to ensure that the conveyor drums are sized according to their applications. For standard applications such as chips, refuse and hog fuel, I'ANCO recommends a minimum head drum diameter (5) times the chain pitch while the tail and snub (take up) are (4) times the chain pitch. For heavy-duty applications such as pulpwood conveyors, truck or railcar dumps and heavy refuse handling, the head drum should be (6) times the chain pitch; tail and snub drums are (5) times the chain pitch.

When specifying the drum width, it should be wide enough to prevent material from falling in between the drum and the conveyor wall but not in a way that would interfere with the sides of the conveyor. I'ANCO's conveyor drums features end plates that provides extra strength and rigidity.



DRUM			BORE SIZES
D	T	W	A
20	1/2	Flight Width + 2	2-7/16 – 3-15/16
24	1/2	Flight Width + 2	2-7/16 – 4-15/16
30	1/2	Flight Width + 2	3-7/16 – 5-15/16
36	1/2	Flight Width + 2	As Required

LONG LINK CONVEYOR MAINTENANCE



CHAIN

To determine the chain elongation:

1. Measure a length of consecutive links (approximately 8 links for 6" pitch and 12 links for 8" pitch chain) to get a representation of total chain elongation.
2. Divide the sum of that dimension by the number of links measured.
3. Subtract the As Manufactured pitch. This is the pitch elongation.

It is recommended that this procedure be repeated in 3 different locations of the same chain and then an average taken.

Cast long link chain has the ability to still operate with efficiency with a chain elongation of up to 13% in some applications. Chain pitch is only one measure of chain wear. Please contact your Sales Representative for additional assistance.

FLIGHT

Chain flights should be inspected at minimum once per year. Broken flights should be replaced at the earliest convenience to minimize any reduced capacity. I'ANCO heavy-duty cast flights have extra thick wear surfaces, however once the flights become less than 3/16" thick, they should be replaced.

WELDING PROCEDURE

Manganese Chain:

When welding cast alloy flights to manganese steel chain, use a 309 MO LTI stainless steel rod or wire. Do not preheat, however material should be at least 50 degrees F. Weave the rod pointing directly at the material favouring the manganese steel. The temperature adjacent to the weld should not exceed 600 degrees F and the weaving will keep heat down.

Alloy Chain:

When welding cast alloy flights to alloy steel chain or welding the tangs together, use a high tensile low hydrogen rod. I'ANCO recommends an AWS E-7018 rod or equivalent. Ensure that the welding surfaces are clean of contaminants and always peen welds afterwards.

SPROCKET

I'ANCO recommends that the condition of the drive sprocket be visually inspected at least 4 times a year. After a period of time, the sprocket teeth will show signs of wear on the contact point. This is normal and should not cause a problem until this wear begins to dish out the teeth to a depth of 1/4". At this time, the sprocket teeth should either be built up or the entire unit replaced. Further wear could cause the chain conveyor to run rough and may accelerate or cause additional chain wear.

SINGLE GROOVE DRUMS

If single groove drums are maintained properly the cast drums could last almost indefinitely.

The groove is made at a specific depth so the vertical links of the chain ride on the bottom of the groove while suspending the horizontal link above the drum face. If the horizontal links do contact the drum face, they could bend to the curvature of the drum. That accelerates link fatigue and could lead to premature chain failure, especially on an 'S-Drive' conveyor where the horizontal links might bend back and forth during each revolution.

With normal use, the bottom of the drum groove will wear deeper. Therefore, the groove should be inspected at least four times a year. To check groove, set the depth gauge over the drum groove at various places. If the gap between the bottom of the gauge and the bottom of the groove is 1/8" or more, the groove is too deep and should be built up.



I'ANCO Products Ltd. specializes in the design, manufacture, and sale of heavy-duty, severe-service conveyor chains and sprockets. I'ANCO is committed to the design, production and implementation of high quality, cost effective products to meet the needs of the forest processing, bulk material handling and mining industries.

Our head office and our two primary operating facilities are located in Surrey, British Columbia. Our design, assembly, and storage facilities are also located in Surrey.

I'ANCO PRODUCTS LTD., SURREY BC CANADA
PHONE: 604 882 1602 FAX: 604 882 1603
WWW.IANCOPRODUCTS.COM